

INSTALLATION AND MAINTENANCE MANUAL

for

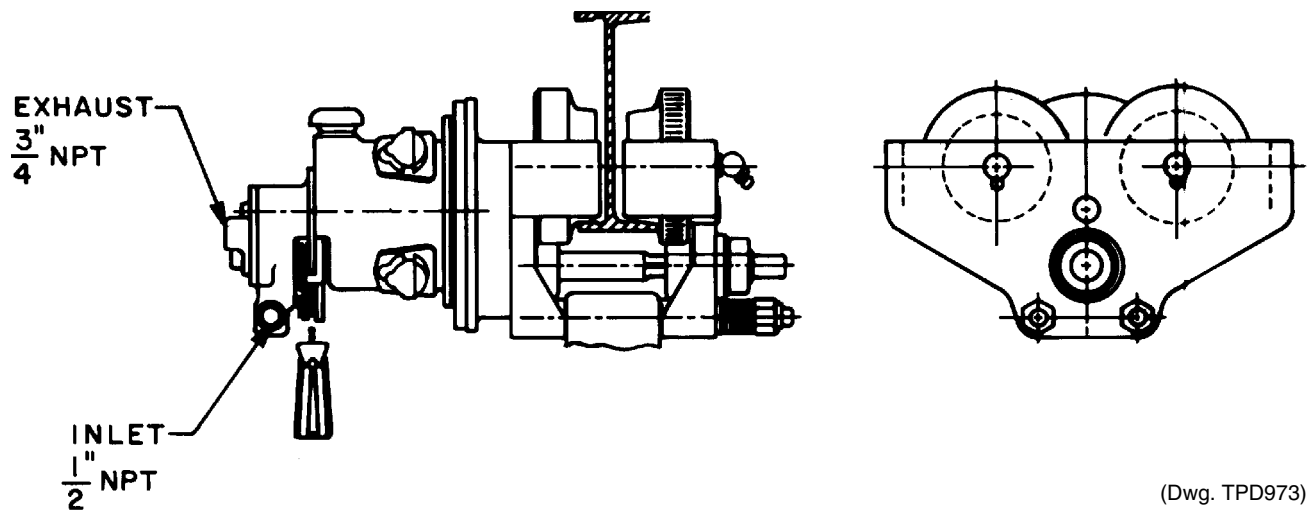
THREE AND SIX TON MOTOR DRIVEN TROLLEYS

	STANDARD		SPARK-RESISTANT	
	TAPER TREAD	FLAT TREAD	TAPER TREAD	FLAT TREAD
3 Ton - Without Hose or Pendant	ATC-0	ATCT-0		
3 Ton - Pull Chain Control	ATC-1	ATCT-1	ATCSR-1	ATCTSR-1
3 Ton - Pendant Control	ATC-2	ATCT-2	ATCSR-2	ATCTSR-2
6 Ton - Without Hose or Pendant	ATE-0	ATET-0		
6 Ton - Pull Chain Control	ATE-1	ATET-1	ATESR-1	ATETSR-1
6 Ton - Pendant Control	ATE-2	ATET-2	ATESR-2	ATETSR-2
3 Ton - Man Rider w/o Hose or Pendant	ATC-MR15/3-0	ATCT-MR15/3-0		
3 Ton - Man Rider Pendant Control	ATC-MR15/3-2	ATCT-MR15/3-2		
6 Ton - Man Rider w/o Hose or Pendant	ATE-MR3/6-0	ATET-MR3/6-0		
6 Ton - Man Rider Pendant Control	ATE-MR3/6-2	ATET-MR3/6-2		

Always operate, inspect and maintain this Trolley in accordance with American Society of Mechanical Engineers National Safety Code (ASME B30.11, B30.16) and any other applicable safety codes and regulations.

TO MAXIMIZE PERFORMANCE AND DURABILITY OF PARTS, OPERATE THIS MOTOR DRIVEN TROLLEY AT 90 psig (6.3 bar/630 kPa) AIR PRESSURE WITH 1/2 inch (13 mm) MINIMUM AIR SUPPLY HOSE AND AN AIRLINE LUBRICATOR AND FILTER.

READ ALL INSTRUCTIONS BEFORE INSTALLING, OPERATING OR REPAIRING THIS MOTOR DRIVEN TROLLEY.



(Dwg. TPD973)

HOW TO ORDER REPAIR PARTS FOR YOUR MOTOR DRIVEN TROLLEY

Your Motor Driven Trolley is designed and constructed to give you long, trouble-free service. In time it may become necessary to order and install new parts to replace those that have been subject to wear. For prompt service and genuine Ingersoll-Rand parts, place orders with your nearest Ingersoll-Rand Distributor. The use of other than Ingersoll-Rand replacement parts may result in decreased Trolley performance, and may invalidate all warranties.

When ordering parts, give your Distributor the following data:

1. Complete model number of the Motor Driven Trolley as it appears on the nameplate.
2. Complete part number, part name and quantity needed as shown on the pages of this manual.

If it becomes necessary to return the complete Motor Driven Trolley or certain parts to the factory, contact the Distributor from whom you purchased the Trolley, or the nearest Ingersoll-Rand Distributor in your locality.

INSTALLING THE MOTOR DRIVEN TROLLEY

Make certain your Motor Driven Trolley is properly installed. A little extra time and effort in doing so can contribute a lot toward preventing accidents and helping you get the best service possible.

For optimum performance, furnish filtered and lubricated air at 90 psig (6.2 bar/620 kPa) air pressure to the Trolley.

Motor Driven Trolleys are furnished with either taper tread wheels or flat tread wheels. Taper tread wheels are used on tapered beams such as I-beams while flat tread wheels are used on flat beams such as monorails and wide flange beams.

Always make certain the beam on which the Trolley is mounted is strong enough to support the combined weight of Trolley and Hoist, plus the weight of a maximum rated load of the Hoist, plus a factor of at least 500% of the combined weights. These Motor Driven Trolleys are to operate with a maximum load of three metric tons for ATC models and six metric tons for ATE models.

The Side Plates (84 or 93) must be spaced so that the wheel flanges extend beyond the width of the beam flange. The wheel flanges must be 1/8 to 3/16 inches (3.2 to 4.7 mm) wider than the beam flange for straight beams and 3/16 to 1/4 inches (4.7 to 6.3 mm) wider for curved beams.

The load must be under the center line of the Trolley and the center line of the supporting beam. To make certain that this condition exists, an equal number of Trolley Mounting Spacers (117) must be located between the Trolley Side Plate and the mounting lug on the Hoist in all four locations. If necessary, to obtain proper adjustment, the number of Spacers on the Motor Side Plate may differ in quantity from the Plain Side Plate by a quantity of only one. However, the quantity of Spacers used on any one Side Plate must be identical.

After installation, operate the Trolley over the entire length of the beam with a capacity load suspended a few inches off the floor to make certain that adjustment and operation are satisfactory. If the Side Plates can be moved closer together while maintaining satisfactory operation, do so by removing an equal number of Trolley Mounting Spacers from each side.

After the Trolley is properly spaced and mounted, tighten the Mounting Bolt Nuts (118) to 150 ft-lb (203 N m) torque for ATC Trolleys having 7/8" (22 mm) bolts and 250 ft-lb (339 N m) torque for ATE Trolleys having 1-1/8" (29 mm) bolts. If loosened, make certain the Trolley Bracket Bolts (116) are tightened into the Motor Side Plate until the threads bottom.

For air supply to the Trolley, install a tee in the air supply line ahead of the Hoist. Connect the air supply hose for the Trolley to the tee and, if a single motor Pendent Throttle is used, to the center pipe connection on the Pendent Throttle Handle (130).

Direction of Trolley travel is determined by connection of the two outside control hoses from the Pendent Throttle Handle to the Trolley. If you want the Trolley to travel to the left when the left-hand Pendent Throttle Lever (132) is depressed, connect the Control Hose (140) leading from the **left-hand side** of the Pendent Throttle Handle to the **right-hand** connection on the Trolley. Connect the Control Hose leading from the **right-hand** side of the Pendent Throttle Handle to the **left-hand** side of the Trolley. Refer to page 10.

If pendent hose length exceeds 17 feet (5.2 m), install quick-exhaust valves. Refer to page 12 for quantity and arrangement.

LUBRICATION

Warning: Lubricate the motor before operating the Trolley. To avoid leakage during shipment, the motor oil was drained. A quantity of oil sufficient for one filling is contained in the can packed with the Trolley.

Before using the Trolley, make sure both Oil Cocks (2) are closed, remove the Vent Cap (3) and pour the entire contents of the can into the Motor Case (1).

Maintain the Oil Level in the Motor Case. At regular intervals, depending on the service to which the Trolley is subjected, check the oil level in the motor as follows:

After the Trolley has been idle for several hours or overnight, open the Oil Cock (2) located at the bottom of the Motor Case (1) and allow the accumulated water to drain out. After draining the water, open the Oil Cock at the side of the Motor Case and add a sufficient amount of oil through the vent cap opening to bring the oil in the motor up to the level of the Oil Cock.

When installing a Motor Driven Trolley, always use an air line filter-lubricator in the air supply line mounted as close to the Trolley as practical. A filter-lubricator large enough to service both the Hoist and Trolley is normally mounted ahead of the tee to accommodate both units. **Note:** If a filter-lubricator is used, the oil level in the motor case must still be maintained. Use a filter-lubricator having a pipe tap inlet and outlet at least as large as the Hoist inlet. Adjust the lubricator to provide a slight oil mist in the exhaust.

LUBRICANTS

Oil: Ingersoll-Rand No. 50 Oil or a good quality SAE 20 or 20W **nondetergent** motor oil. A good quality SAE 10 or 10W **nondetergent** motor oil may be used when temperatures remain below 30° F (-1.1° C). When temperatures remain above 80° F (26.6° C), a good quality SAE 30 or 30W **nondetergent** motor oil may be used.

Grease: Ingersoll-Rand No. 68 Grease or a good quality No. 2 multi-purpose grease.

Grease: Ingersoll-Rand No. 70 Grease or a good quality No. 2 extreme pressure multi-purpose grease.

LUBRICATION SCHEDULE

Time Interval	Lubricant	Component	Procedure
Regularly	Ingersoll-Rand No. 50 Oil	In-line lubricator	Fill and maintain the oil level of the lubricator reservoir.
		Motor Case	Drain water and maintain oil level.
Each 200 hours	Ingersoll-Rand No. 68 Grease	Wheel Bearings	Inject 30 cc of grease into each Grease Fitting (87 or 96).
Each 500 hours or whenever the Trolley is dis-assembled	Ingersoll-Rand No. 70 Grease	Gearing and bearings	Disassemble the Motor and Gear Case as instructed in the disassembly instructions. Wipe the old grease from the gears and then liberally coat all the gears and bearings with grease. Reassemble the Trolley as instructed in the assembly instructions.

DISASSEMBLY

WARNING: DISCONNECT THE AIR SUPPLY HOSE TO THE HOIST AND MOTOR DRIVEN TROLLEY BEFORE PERFORMING ANY MAINTENANCE OR REPAIRS ON THE HOIST OR TROLLEY. REMOVE THE HOIST AND ALL LOADS IF THE TROLLEY MUST BE DISASSEMBLED.

General Instructions

1. Do not disassemble the Motor Driven Trolley any further than necessary to replace a worn or damaged part.
2. Do not remove any part which is a press fit in or on a subassembly unless the removal of that part is necessary for replacement or repairs.
3. Do not disassemble this Trolley unless you have a complete set of new gaskets and seals on hand for replacement.
4. Whenever grasping a part in a vise always use leather-covered or copper-covered vise jaws to protect the surface of the part and help prevent distortion. This is particularly true of threaded members and housings.

Reverse Valve Removal (for Trolleys with Pull Chain Throttle)

Unscrew the Throttle Valve Cap (49) and remove the Poppet Throttle Valve (46) from the Valve Chest (32) before attempting to withdraw the Reverse Valve (51) from the Reverse Valve Bushing (36).

Shuttle Valve Removal (for Trolleys with Pendent Throttle)

Unscrew the two Shuttle Valve Caps (63) and remove the Shuttle Valve Chest Gaskets (64), Shuttle Valve Washers (65) and Shuttle Valve Springs (66) before attempting to withdraw the Shuttle Valve (62) from the Shuttle Valve Bushing (58).

Valve Chest Removal

Use two No. D01-932 Jack Bolts, listed under Maintenance Tools, to remove the Valve Chest (32) or Shuttle Valve Chest (55) from the Motor Case (1).

Removal and Installation of Bushings in the Valve Chest

Use an arbor that will clear the Bushing Key (34 or 57) that projects into each valve chest bore, and press on the bushing face that is flush with the valve chest face, when pressing either the Rotary Valve Bushing (33 or 56) or Reverse Valve Bushing (36) from the Valve Chest. Otherwise the Bushing Key will be sheared off.

If the Rotary Valve (52 or 67) is too tight in the new Bushing, lap it to a good running fit; if too tight to lap, ream the Bushing 1.000".

Do not lap the Reverse Valve (51) into the Reverse Valve Bushing. If the Valve fits too tightly in the new Bushing, ream the Bushing 1.250".

Start the new Shuttle Valve Bushing (58) into the Shuttle Valve Chest (55) so that the large elongated port in the Bushing is in alignment with the central (exhaust) port in the Chest. Press the Bushing into the Chest with the No. 38181 Shuttle Valve Bushing Inserting Tool which will position the Bushing at the proper depth in the Chest. Use the No. 36860 Reamer to properly size the new Bushing after pressing it into the Chest.

Motor Removal

Open the lower Oil Cock (2) and drain the oil from the Motor Case (1).

Unscrew and remove the eight Motor Case Screws (73) and separate the motor from the Motor Case Cover (82).

Motor Disassembly

Remove the Valve Chest (refer to Valve Chest Removal).

Unscrew and remove the four Cylinder Cap Screws (24) from one of the Cylinder Heads (22) and pull the Cylinder Head and Cylinder Sleeve (22A) from the Motor Case (1). Rotate the Crank (9) until the Piston (26), from which the Cylinder Sleeve was removed, is at top dead center. Slide the Wrist Pin (28) from the crosshole and lift the Piston from the Connecting Rod (15). Repeat this process until all the Cylinder Sleeves and Pistons are removed.

Grasp the Crank Assembly and withdraw it from the Motor Case.

Crank Assembly

The two sections of the Crank (9) are joined and marked before final machining; therefore only those with identical marking can be used together. If two or more Cranks are disassembled at one time, be sure the stamping on each web is identical when reassembling.

Lightly strike the large end of the Crank Lock Pin (11) to firmly seat it in the Crank and tightly screw the Crank Lock Pin Nut (12) onto it.

Piston and Cylinder Replacement and Installation

Install each Piston Ring (27) so that the small dot on one face of the Ring is toward the top, or closed end, of the Piston (26).

Do not expand the Piston Ring (27) more than is necessary to slide it over the Piston (26) and into the groove.

Trolley Information

The Trolley Wheels (119), Idler Gears (102) and Drive Shaft (107) are held in position by Retaining Rings (86, 104 or 108). Make certain the Retaining Rings are fully seated during assembly. However, do not expand the Retaining Rings more than is necessary to slip the Rings over the end of the Shafts.

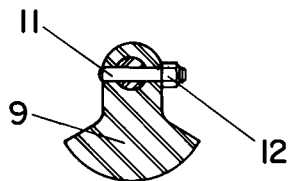
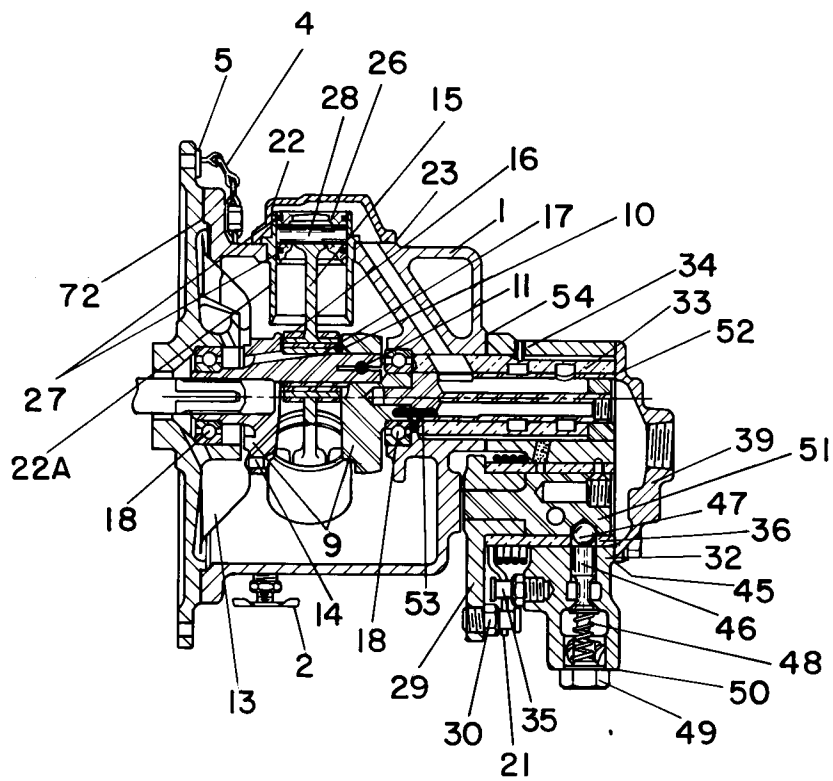
The Spline Gear (112) is held in position by the Spline Gear Retaining Collar (114) and the Retaining Collar Setscrew (115). Make certain the Setscrew enters the groove in the Spline Gear during assembly.

The Drive Shaft Seals (92 or 101) must be installed below flush with the seal lips outward. All bearings and gears are to be lubricated at assembly. Refer to the lubrication instructions on page 3.

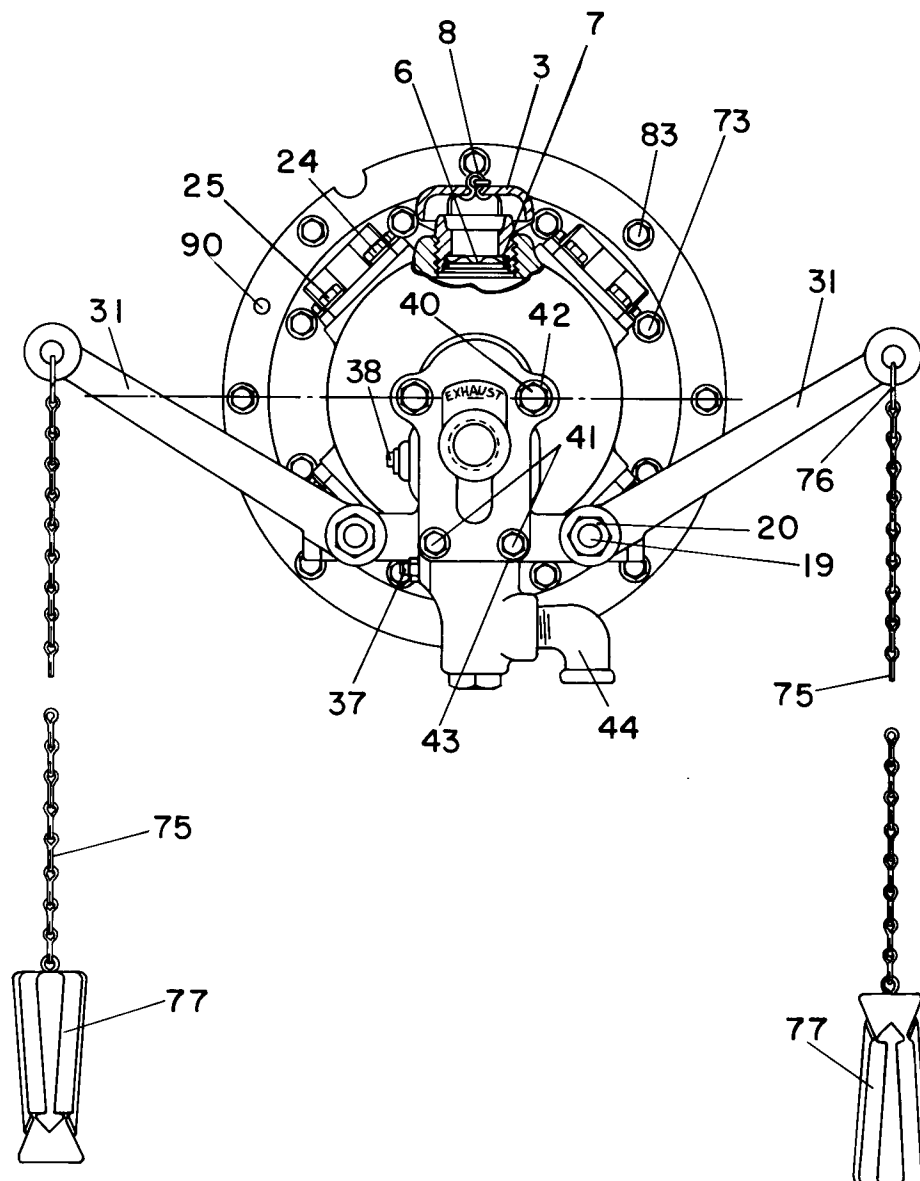
If the Trolley Bracket Bolts (116) are loosened, they must be threaded into the Motor Side Trolley Bracket (84) until the threads bottom. One end of each Bolt has a hex recess that is used to tighten the Bolt into the Bracket.

MAINTENANCE TOOLS

TOOL NUMBER FOR ORDERING	NAME OF TOOL	OPERATION
D01-932	Valve Chest Jack Bolt (2)	Removing the Valve Chest (32) or Shuttle Valve Chest (55) from the Motor Case (1).
D01-933	Piston Ring Compressor	Compressing the Piston Rings (27) when installing a Cylinder Sleeve (22A).
22891	Throttle Valve Seat Reamer	Refacing the seat in the Valve Chest (32) for the Poppet Throttle Valve (46).
23470	Throttle Valve Stem Reamer	Reaming the throttle valve stem hole in the Reverse Valve Bushing (36) after installing a new Bushing in the Valve Chest (32).
36860	Shuttle Valve Bushing Reamer	Reaming the Shuttle Valve Bushing (58) after pressing it into the Shuttle Valve Chest (55).
38181	Shuttle Valve Bushing Inserting Tool . .	Inserting a new Shuttle Valve Bushing (58) in the Shuttle Valve Chest (55).



SECTION THRU CRANK LOCK

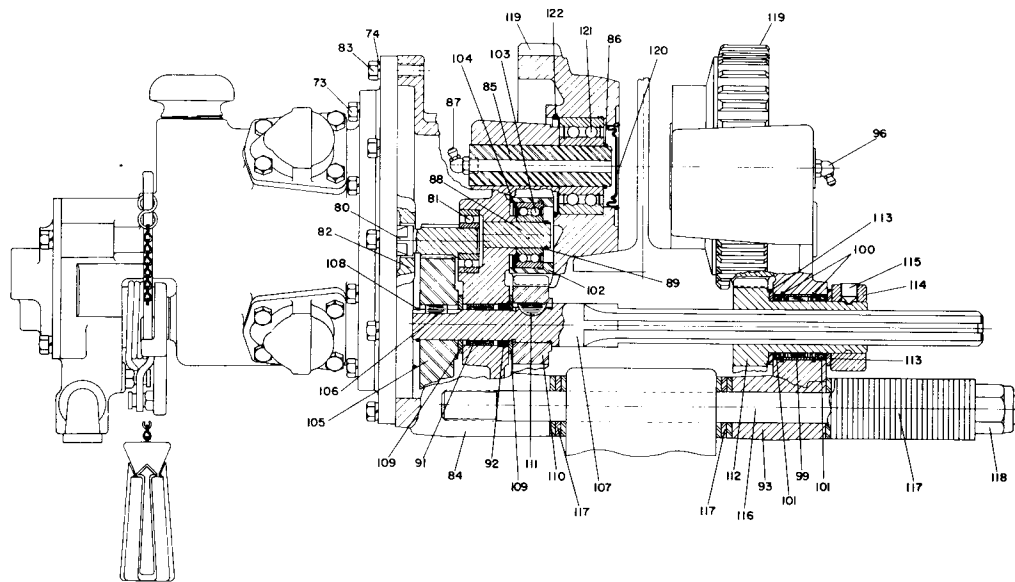


PART NUMBER FOR ORDERING

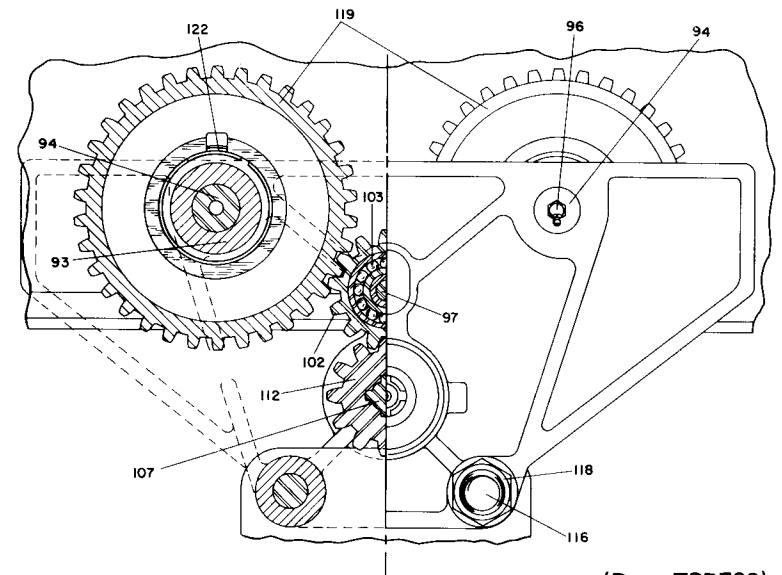
PART NUMBER FOR ORDERING

		PULL CHAIN THROTTLE	PENDENT THROTTLE			PULL CHAIN THROTTLE	PENDENT THROTTLE
	Trolley Motor Assembly.	D00-A501B	D00-A501B W/PT	39	Valve Chest Cover.	D01-546A	---
1	Trolley Motor Case	D01-501C	D01-501C	40	Valve Chest Long Screw (2) .	D01-548	---
2	Oil Cock (2)	D02-308	D02-308	41	Valve Chest Short Screw (2) .	T33-68	---
3	Vent Cap.	D02-303A	D02-303A	42	Long Screw Lock		
4	Vent Cap Chain	D02-891	D02-891		Washer (2)	D02-321	---
5	Vent Cap Chain S-Hook . . .	D02-421	D02-421	43	Short Screw Lock		
6	Vent Cap Screen	D02-899	D02-899		Washer (2)	T11-58	---
7	Vent Cap Screen Retainer . .	6CND-233-1/2	6CND-233-1/2	44	Inlet Ell	D01-581	---
8	Vent Cap Cotter.	D02-893	D02-893	45	Valve Chest Cover Gasket . .	D01-928	---
	Crank Assembly.	D01-A516B	D01-A516B	46	Poppet Throttle Valve	D01-940	---
9	Crank Bare (consists of two matched pieces which are not sold separately). . .			47	Throttle Valve Ball (1/2"		
		D01-516B	D01-516B	48	dia. steel ball)	D10-280	---
10	Crank Pin Sleeve	D01-519A	D01-519A	49	Throttle Valve Spring.	B01-11	---
11	Crank Lock Pin	D01-520A	D01-520A	50	Throttle Valve Cap	D01-943	---
12	Crank Lock Pin			51	Throttle Valve Cap Gasket. .	D01-946	---
	Nut	501-639	501-639	52	Reverse Valve	D00-944	---
13	Oil Splasher	D01-540A	D01-540A	53	Rotary Valve	D00-526A	---
14	Oil Splasher			54	Rotary Valve Drive Pin. . .	D01-527A	---
	Rivet (3)	T06-66	T06-66		Valve Chest Gasket	D01-128	---
15	Connecting Rod (4).	D01-509A	D01-509A	55	Shuttle Valve Chest Assembly. .	---	D00-A245
16	Connecting Rod Ring (2) . .	D01-510	D01-510	56	Shuttle Valve Chest.	---	D00-245
17	Connecting Rod Bushing. . .	D01-511A	D01-511A	57	Rotary Valve Bushing	---	D01-525AS
18	Crank Bearing (2)	G7-24	G7-24	58	Bushing Key	---	D02-538
19	Throttle Lever Bolt (2). . . .	D02-411A	D02-411A	59	Shuttle Valve Bushing	---	DLC-247
20	Throttle Lever Bolt Nut (2) . .	D02-418A	D02-418A	60	Shuttle Valve Chest Cover . .	---	D01-241
21	Throttle Lever Spring.	D01-412A	D01-412A	61	Air Inlet Plug	---	D02-351
22	Cylinder Head (4).	D01-H505A	D01-H505A	62	Valve Chest Gasket (2)	---	D01-128
22A	Cylinder Sleeve (4)	D01-L505A	D01-L505A	63	Shuttle Valve	---	DLC-246
23	Cylinder Gasket (4).	D01-507	D01-507	64	Shuttle Valve Cap (2).	---	DLC-238
24	Cylinder Cap Screw (16)	D01-506	D01-506	65	Shuttle Valve Cap Gasket (2). .	---	G601-411
25	Cylinder Cap Screw			66	Shuttle Valve Washer (2). . . .	---	DLC-248
	Washer (16)	D01-504	D01-504	67	Shuttle Valve Spring (2)	---	DLC-268
26	Piston (4)	D01-513A	D01-513A	68	Rotary Valve	---	D00-526A
27	Piston Ring (2 for each Piston)	D01-337	D01-337	69	Rotary Valve Drive Pin. . . .	---	D01-527A
28	Piston Wrist Pin (4).	TC-389B	TC-389B	70	Shuttle Valve Chest		
29	Throttle Control Arm	D01-555A	D01-555A		Screw (2).	---	D01-548
30	Throttle Spring Stop Pin . . .	D02-553	D02-553	71	Valve Chest Screw Lock		
31	Throttle Lever (2).	D01-556	D01-556		Washer (2)	---	D02-321
*	1/2" Lock Washer (2)	D10-322	D10-322	72	Hose Union (3)	---	MR-129
	Valve Chest Assembly	D00-A545A-4	---	73	Motor Case Cover Gasket	D01-592A	D01-592A
32	Valve Chest	D01-545A-4	---	74	Motor Case Screw (8)	W9-56	W9-56
33	Rotary Valve Bushing	D01-525AS	---	75	5/16" Lock Washer (16).	T11-58	T11-58
34	Bushing Key (2).	D02-538	---		Pull Chain (specify total length for two chains required)		
35	Throttle Spring Stop Pin . . .	D02-553	---		for standard Trolleys	D02-B413	---
36	Reverse Valve Bushing	D01-945S	---		for spark resistant Trolleys. .	D02-1413	---
37	Grease Fitting	R1-188	---	76	S-Hook (2 for each Chain)	D02-421	---
38	Pipe Plug	TC-368	---	77	Throttle Handle (2)	MR-415	---

* Not illustrated.



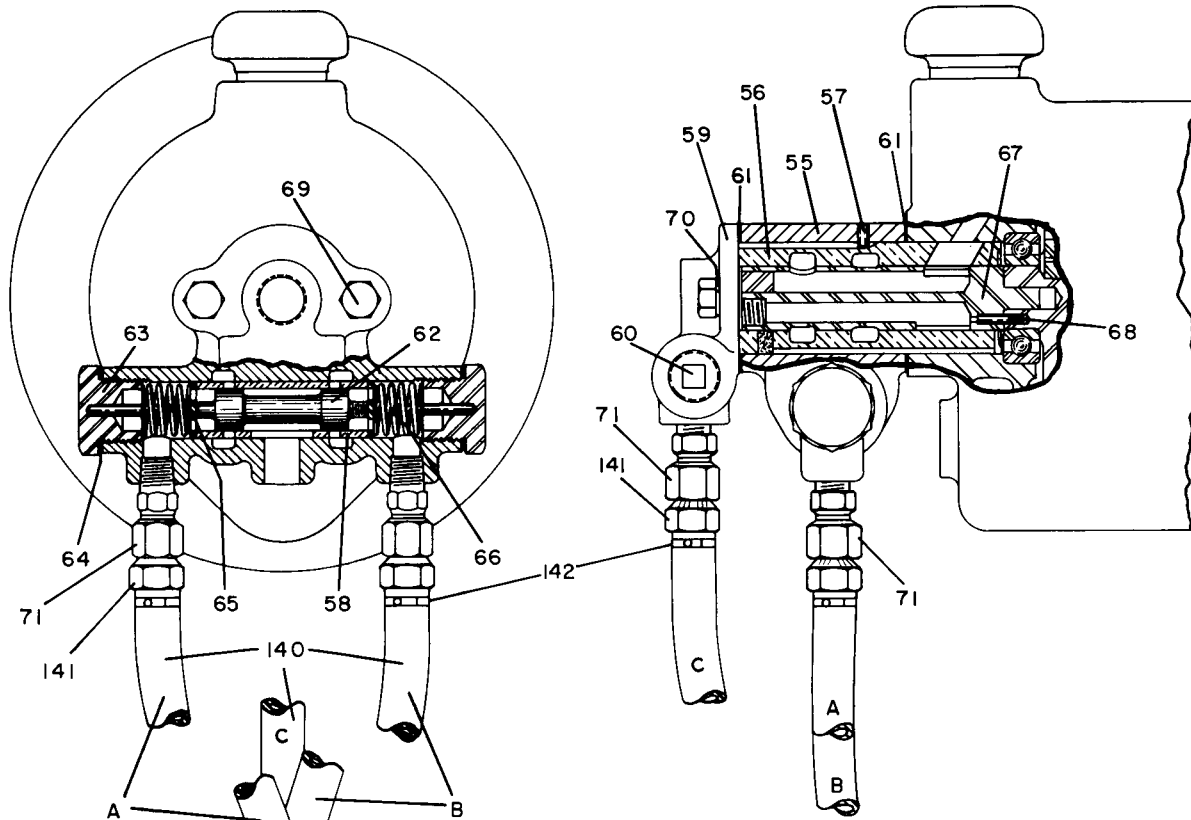
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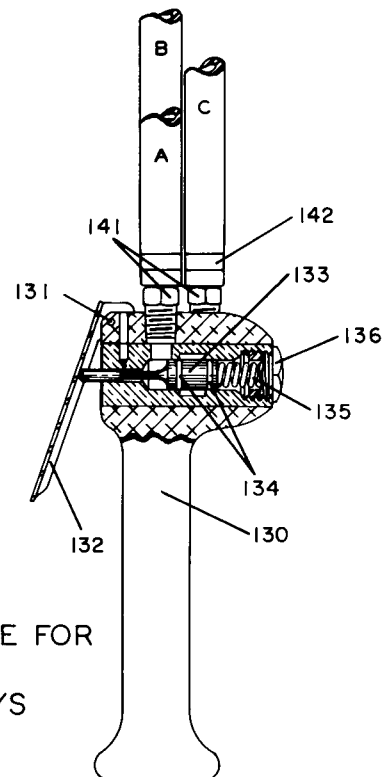
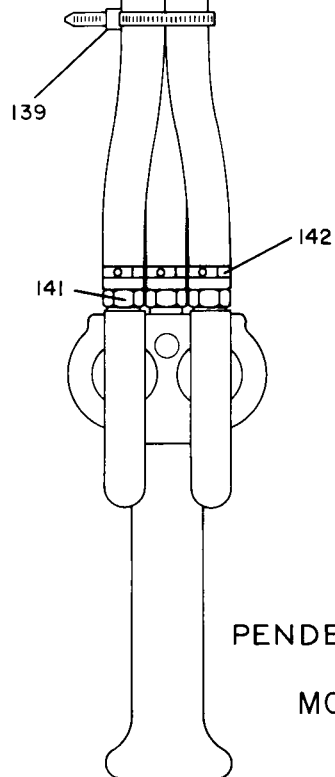
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		PART NUMBER FOR ORDERING				PART NUMBER FOR ORDERING	
		FOR ALL ATC MODELS	FOR ALL ATE MODELS			FOR ALL ATC MODELS	FOR ALL ATE MODELS
80	Motor Shaft	D02-487B	D02-487B	105	Intermediate Gear	D02-849A	D10-849A
81	Motor Shaft Bearing	T02-33	T02-33	106	Intermediate Gear Key	TB-410	TB-410
82	Motor Case Cover	D01-486B	D01-486B	107	Drive Shaft	D02-829LA	D02-829LA
83	Motor Case Cover Screw (8)	B8-240	B8-240	108	Drive Shaft Retaining Ring	ATC-361	ATC-361
84	Trolley Bracket—Motor Side			109	Drive Shaft Washer (2).	ATC-830	ATC-830
	standard	D02-485C	D10-485C	110	Drive Shaft Gear	D02-834B	D02-834B
	spark-resistant	D02-1485C	D10-1485C	111	Drive Shaft Gear Key	D02-370	D02-370
85	Trolley Wheel Pin (2).	D02-827A	D10-827A	112	Spline Gear	D02-836B	D02-836B
86	Wheel Retaining Ring.	CE220-631	ATE-828	113	Spline Gear Bearing Washer (2).	ATC-838	ATC-838
87	Grease Fitting	23-189	23-189	114	Spline Gear Retaining Collar	D02-841	D02-841
88	Idler Gear Pin	D02-846A	D02-846A	115	Retaining Collar Setscrew	HU-842	HU-842
89	Gear Retaining Ring	ATC-21	ATC-21	116	Trolley Bracket Bolt (2).	ATC-851	ATE-851
90	Dowel Pin (2)	D02-347	D02-347	117	Trolley Bracket Spacer	TP223A-038	D10-442
91	Drive Shaft Bearing	C6H20A22-753	C6H20A22-753	118	Trolley Bracket Bolt Nut (2)	D02-440B	D10-440B
92	Drive Shaft Seal	ATC-833	ATC-833	119	Motor Trolley Wheel (4)		
93	Trolley Bracket—Plain Side				for standard taper tread		
	standard	D02-823A	D10-823A		models	ATC-824	D10-824A
	spark-resistant	D02-1823A	D10-1823A		for spark-resistant taper		
94	Trolley Wheel Pin (2).	D02-827A	D10-827A		tread models.	ATC-1824	D10-1824A
*	Wheel Retaining Ring.	CE220-631	ATE-828		for standard flat tread		
96	Grease Fitting	23-189	23-189		models	ATC-824T	D10-T824A
97	Idler Gear Pin	D02-846A	D02-846A		for spark-resistant flat		
*	Gear Retaining Ring	ATC-21	ATC-21		tread models.	ATC-1824T	D10-T1824A
99	Drive Shaft Bearing	R11F60-26	R11F60-26	120	Trolley Wheel Cover (1 for		
100	Bearing Retaining Ring (2).	ATC-118	ATC-118		each Wheel)	D02-826	D10-826A
101	Drive Shaft Seal (2).	C6H20A-271	C6H20A-271	121	Trolley Wheel Bearing (4).	D02-825	D10-825
102	Idler Gear (2)			122	Trolley Wheel Retaining Ring (4)	D02-815	D10-815
	standard	D02-843A	D02-843A				
	spark-resistant	D02-1843A	D02-1843A				
103	Idler Gear Bearing.	D02-844A	D02-844A				
104	Idler Gear Bearing Retaining						
	Ring	JC3350-118	JC3350-118				

* Not illustrated.



NOTE: IN ORDER THAT TROLLEY WILL MOVE TO LEFT WHEN THROTTLE LEVER ON LEFT OF PENDENT THROTTLE HANDLE IS PRESSED, AND MOVE TO RIGHT WHEN THROTTLE LEVER ON RIGHT IS PRESSED, HOSES A & B MUST BE CROSS-ED AS SHOWN BETWEEN HANDLE AND SHUTTLE VALVE CHEST.



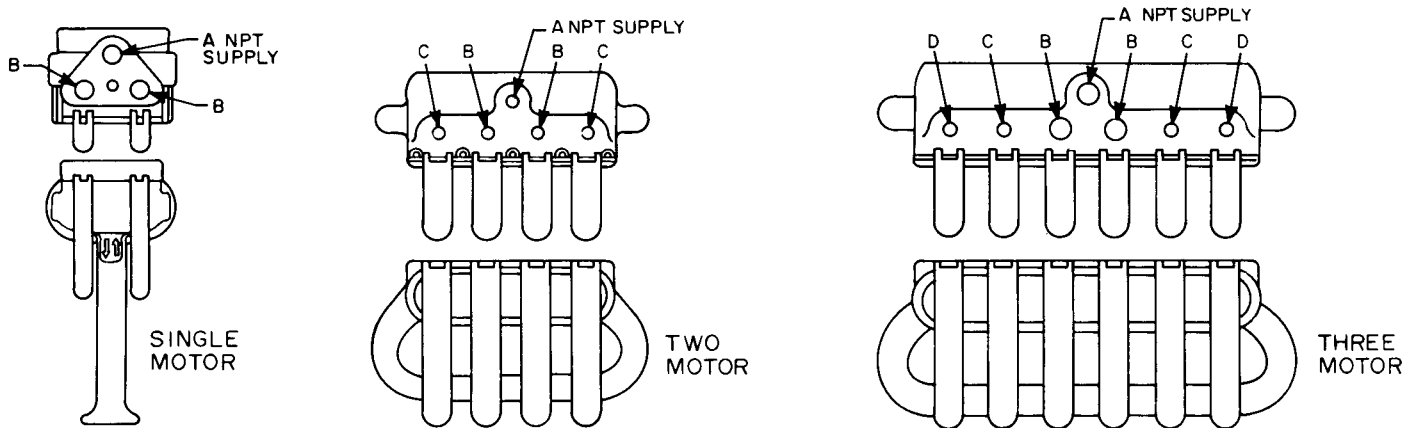
PENDENT THROTTLE FOR
ATC AND ATE
MOTOR TROLLEYS

(Dwg. TPA1134)

PART NUMBER FOR ORDERING

	Pendent Throttle Handle Assembly (includes hose for seven foot pendent).	MR-A269A-7
130	Pendent Throttle Handle Assembly.	MR-269A
131	Throttle Lever Pin	DLC-120A
132	Pendent Throttle Lever (2)	MR-273
133	Pendent Throttle Valve (2)	MR-264
134	Pendent Throttle Valve Seal Ring (2 for each Valve)	AF120-289
135	Pendent Throttle Valve Spring (2)	D01-51A
136	Pendent Throttle Valve Cap (2)	D02-180A
*	Lever Pin Retaining Screw (2)	MLK-SK662
*	Retaining Screw Lock Washer (2)	D02-138
139	Hose Strap (3) (longer pendent lengths require additional Straps)	HRE20A-283
140	Hose (3) (specify total length required)	BH6A
141	Hose Nipple (2 required for each Hose)	RV1-46
142	Hose Clamp (2 required for each Hose)	K6U-4

* Not illustrated.



(Dwg. TPC492)

PENDENT HANDLES

Type	Part Number	Dimensions (NPT Air Inlet)			
		A in.	B in.	C in.	D in.
Single Motor	MLK-A269A	1/8	1/8	---	---
	MR-269A	3/8	3/8	---	---
	C6H20A-A169B	1/2	1/2	---	---
Two Motor	PILOT-A122B	3/8	1/8	1/8	---
	HRA-A122B	3/8	1/8	3/8	---
	MR-A122A	3/8	3/8	3/8	---
	C6H20A-A122B	1/2	1/2	3/8	---
Three Motor	PILOT-A132B	3/8	1/8	1/8	1/8
	HRA-A132B	3/8	1/8	3/8	3/8
	MR-A132A	3/8	3/8	3/8	3/8
	C6H20A-A132B	1/2	1/2	3/8	3/8

APPROXIMATE
AIR FLOW RATES

NPT Air Inlet in.	SCFM
1/8	★ 15
3/8	100
1/2	200

★ For pilot air only.

Note: When a pendent controlled Hoist is purchased with pendent controlled Power Trolley Tractor or Crane Propelling Motor, if requested, the required two or three Motor Pendent is furnished at no extra price in place of the individual Pendants.

KITS AND ACCESSORIES

Hook-on Trolley Kits: Used to convert plain rigid Trolleys and powered rigid Trolleys to hook-on type for use with hook mounted Hoists.

No. TP3-K426A (03700895) for 3 ton Trolleys
 No. TP6-K426 (03706413) for 6 ton Trolleys

ATC Trolley Adapter Kit: Used to mount A, B, MLK and HL1000K Hoists on ATC Trolleys.

No. TA-K852A (03723566)

Muffler: Comes with retaining chain and a reducer bushing to fit either 3/4" or 1" NPT exhaust.

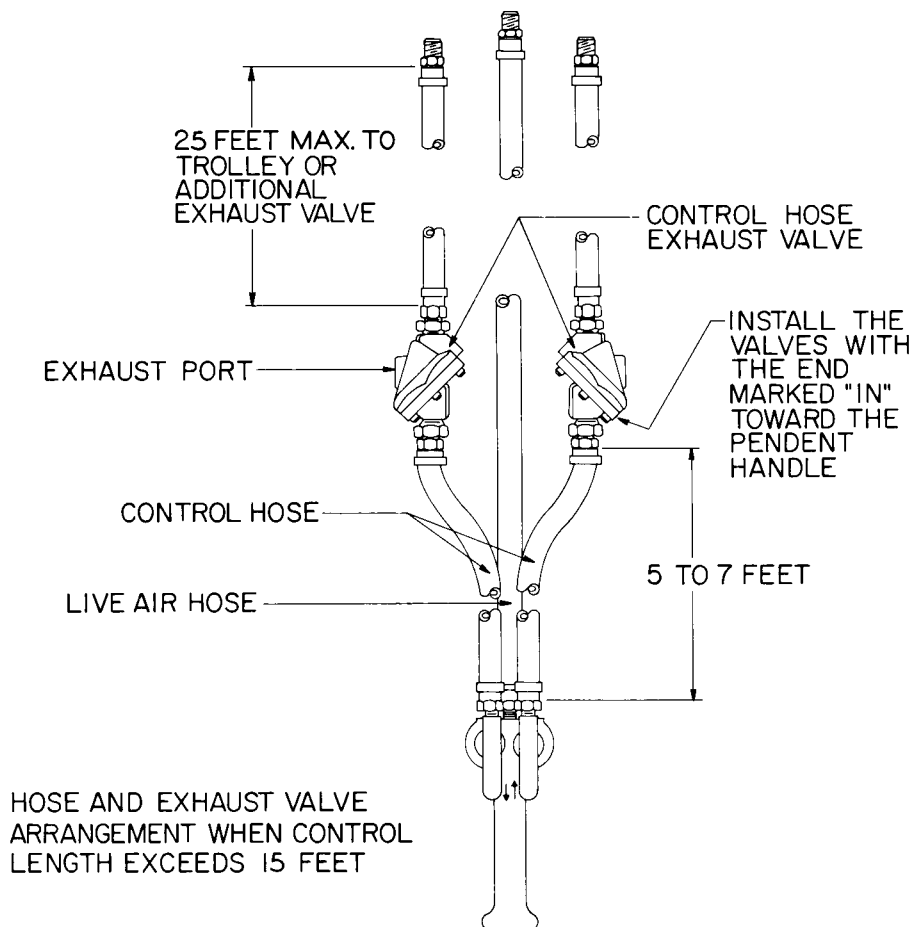
No. D02-674A (03169521)

Ecology Kits: Used to remove air line lubrication contaminants from the exhaust and lower the sound levels on piston driven motors. Each kit includes a filter, muffler and all the required hardware to install them.

No. HEK-1 (03456076) for Trolleys with pull chain controls
 No. HEK-3 (03512746) for Trolleys with pendent controls

Quick-Exhaust Kit: Recommended when Pendent Hoses exceed 15 feet in length. Includes Valve, fittings and clamps for one 3/8" I. D. Control Hose. Install the first pair of Valves between 5 and 7 feet from the Pendent Handle. Any additional Valves should equally divide the remaining hose length.

Kit Number	Pendent Length	Recommended Quantity
MR-K939-6 (03706504)	15 ft. or less	0
	16 ft. to 30 ft.	1 pair (2 Kits)
	31 ft. to 55 ft.	2 pair (4 Kits)
	56 ft. to 80 ft.	3 pair (6 Kits)



(Dwg. TPB787)

Typical installation of Quick-Exhaust Valves on Trolleys with long Pendent Control Hoses